## Recipient of the prestige 2013 "Rising Star Award"

Owing to MIPRO's outstanding performance in international sales, product innovation and development and branding achievement, MIPRO won the prestige 2013 "Rising Star Award" from Taiwan's Ministry of Economic Affairs in addition to "National Invention & Creation Award" in 2012 and "First Brand" & "Gold Medal Quality Products" awards in 2011.











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# Wireless PA Systems

2014 General Catalog

# **Technology and Artistic Creation**



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# Company Profile

MIPRO was founded in 1995 in Chiayi, Taiwan by founder K. C. Chang. Solomon Chang is the company president and leads a team of 200 employees in developing and manufacturing wireless microphone and wireless PA systems. Our motto is "innovation, quality and satisfied users".

A US\$10 million corporate headquarters was built in 1996 and is housed in a modern, 5,000-square-meter production and office facility. This modern facility is ISO-9001 certified by German TÜV and implemented quality assurance and efficient computerized production management systems.

Thanks to continued sales growth, size of headquarters was expanded twice to 13,000 square meters by 2006. Furthermore, adjacent land and buildings were purchased to anticipate future sales growth and expansion needs. Today, total corporate headquarters covers an area of more than 14,000 square meters.

MIPRO specializes in designing and manufacturing professional wireless microphone systems. Founder named the company "MIPRO" which derived from the words "Microphone Professionals". Products are marketed in 80 countries globally. Gary Kayye, A/V consultant & educator, stated MIPRO is "Top Five New Companies to Watch".









After 18 years of steady growth, MIPRO is well known for innovative design products and has won Taiwan Excellence award and often nominated in the TEC awards' Wireless Technology category. Recently, MIPRO has won the "National Invention and Creation Award" and "Rising Star Award" from Taiwan's Ministry of Economic Affairs. MIPRO president, Solomon Chang, won the "National Executive Manager Award".

MIPRO's mission is "to develop best wireless microphone products and to create a world-class brand in the wireless microphone industry."



Rising Star Award



National Invention & Creation Award



Manager Award



First Brand

Taiwan Gold Medal **Quality Product** 



TEC AWARD

# **Personal Wireless PA Systems**



# Personal Wireless PA Systems

# MA-100SB Single-Channel Personal Wireless PA System









**ACT-32H** 

ACT-32T

Patents :

aiwan Utility M409663、M409662 Design D143790、D143791 China Utility ZL201120076295.2、ZL201120076293.3 Design ZL201130046607.0、ZL201130046594.7 U.S. Design D653238 Design D651596

# MA-100DB Dual-Channel Personal Wireless PA System

#### **Controls and Indicators**





#### **Profile**

MA-100 is an all new, ultra compact and ultra light wireless PA system. The MA-100 is powerful and offers a vast array of features in an easy-to-use package. It can be easily carried via the padded shoulder strap, built-in handle, or mounted on a microphone stand. It is an excellent public address solution for small crowds.

#### **Features**

- 1. Rugged yet lightweight one-piece molded cabinet.
- Built-in 1 or 2 wireless receivers with 16 auto-scannable frequencies.
- 3. Built-in USB music player & recorder with LCD screen.
- 4. Built-in one-button alarm/siren for warning of threats.
- 5. User-friendly control panel provides intuitive easy operation.
- 6. High efficiency class-D amplifier drives full-range speaker.
- 7. AC and lithium rechargeable battery operation.
- 8. Switching power supply efficiently provides a regulated output voltage.
- 9. Available in black or white color.

## **Ideal Applications**

- School classrooms
- Places of worship
- Presentations, seminars and meetings
- Day-care activities; playground duty
- Indoor/outdoor gatherings
- Tour guides & paging
- Fire fighters, law enforcement, search & rescue squads
- Street performers
- Factory and company tours

Model		MA-100SB	MA-100DB		
		Portable PA			
Max. Power Output		50 Watts			
Amplifier		Class D			
Sensitivity		Typical: 90 dB   Maximum: 102 dB			
T.H.D.		< 1%			
Frequency Re	esponse	50 Hz~18 kHz			
Loudspeaker		5 " full-range, high efficiency			
Audio Inputs	Wired	6.3 mm (1/4 ") optional MM-107 microphone			
Audio iriputs	Line-In	3.5 mm (1/8 ")			
Audio Output		3.5 mm (1/8 ")			
Installation		Microphone stand, table mounted, shoulder belt			
Power Supply	AC	External 100~240V AC switching power supply			
Fower Supply	DC & Battery	Built-in 14.8V/2.6AH rechargeable lithium battery			
Charge Time		Up to 4 hours (automatic charging management)			
Standby Time		Up to 12 hours	Up to 10 hours		
Battery Indica	tor	4-level indicator (25/50/75/100%)			
Dimensions (\	$N \times H \times D$ )	135 × 140 × 240 mm (5.3 × 5.5 × 9.4 ")			
Weight (batte	ry included)	Approx.1.8 kg (3.9 lbs)	Approx.1.9 kg (4.1 lbs)		
Color		Black or white option			
		Wireless System			
Receiver Cha	nnel	Single	Dual		
Frequency Ra	ange	480~934 MHz (country dependent)			
Bandwidth		24 MHz			
Preset Chann	els	16			
Channel Set-	up	Scan & ACT sync			
Transmitter		ACT-32H Handheld   ACT-32T Bodypack			
Antenna		Built-in			
		Digital Audio Player			
Built-in 2.0 USB Port		Yes			
Play & Record		Yes			
Operation		On-board. USB remote control included.			
Patents & App	orovals	Patented. Telecom and safety regulations approved.			
Notes		Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.			

# Personal Wireless PA Systems

# MA-101B Personal Wireless PA System





## **Controls and Indicators**



#### **Profile**

For over 17 years, MA-101 has been mass-produced and it remains a market-leading system as MIPRO ensures product design, craftsmanship and reliability are second to none. Now, a new model MA-101B is introduced and upgraded to rechargeable lithium battery from sealed lead-acid battery for improved reliability, longer life and reduced weight. Grayish black color design for product differentiation.

Lightweight, robust and battery operated, this popular system is simple to use and can be easily carried via the built-in handle, on a shoulder strap, or mounted on a microphone stand. Perfect PA for a small crowds.

#### **Features**

- 1. Lightweight, contoured and ultra portable design.
- 2. Up to 10 hours of standby time per 4-hour charge.
- 3. Built-in wireless receiver with 16 auto-scannable frequencies.
- 4. 3.5mm line input accepts external MP3, iPod and CD player.
- 5. AC and lithium rechargeable battery operation.
- 6. Powerful and crystal-clear sound projection thanks to high efficiency amplifier drives a fullrange speaker.

## **Ideal Applications**

- School classrooms
- Places of worship
- Presentations, seminars and meetings
- Day-care activities; playground duty
- Indoor/outdoor gatherings
- Tour guides & paging
- Fire fighters, law enforcement, search & rescue
- Street performers
- Factory or company tours

		Portable PA		
Max. Power Output		45 Watts		
Amplifier		Class AB		
Sensitivity		Typical: 95 dB   Maximum: 107 dB		
T.H.D.		< 1%		
Frequency Re	sponse	60 Hz~15 kHz		
Loudspeaker		5 " full-range, high efficiency		
Audia Innuta	Wired	6.3 mm (1/4 ") optional MM-107 microphone		
Audio Inputs	Line-In	3.5 mm (1/8 ")		
Audio Output		3.5 mm (1/8 ")		
Installation		Microphone stand, table mounted, shoulder belt		
Dawar Cumply	AC	External 100~240V AC switching power supply		
Power Supply	DC & Battery	Built-in 14.8V/2.6AH rechargeable lithium battery (MB-25)		
Charge Time		Up to 4 hours (automatic charging management)		
Standby Time		Up to 10 hours		
Battery Indica	tor	Single LED indicator		
Color		Grayish Black		
Dimensions (\	$V \times H \times D$ )	160 × 178 × 285 mm (6.3 × 7 × 11.2 ")		
Weight (batter	ry included)	Approx. 2.2 kg (4.8 lbs)		
		Wireless System		
Receiver Cha	nnel	Single		
Frequency Ra	inge	480~934 MHz (country dependent)		
Bandwidth		24 MHz		
Preset Channels		16		
Channel Set-up		Scan & ACT sync		
Transmitter		ACT-32H Handheld   ACT-32T Bodypack		
Antenna		Built-in		
Patents & Approvals		Patented. Telecom and safety regulations approved.		
Notes		Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.		

# **Personal Wireless PA Systems**

# MA-202B Personal Wireless PA System





Patents: Taiwan Utility M339173、M339174 Design D126294

#### **Controls and Indicators**



#### **Profile**

MA-202B is the flagship of personal wireless PA systems. This powerful system boasts versatile feature such as built-in convenient storage compartment and battery charger for ACT-222T handheld transmitter microphone. Lightweight, robust and battery operated, it is an ideal public address solution for small to medium crowds.

#### **MA-202B Features**

- 1. Culmination of personal wireless PA designs.
- 2. Powerful and crystal-clear sound projection.
- High efficiency class-D amplifier drives 2-way loudspeakers with level limiter.
- 4. Built-in wireless receiver with 16 auto-scannable frequencies.
- 5. One-touch Scan & ACT sync buttons for fast and easy channel set-up.
- 6. AC and lithium rechargeable battery operation.
- 7. Up to 8-hour of stand-by time per 4-hour full charge.
- USB & SD music player with LCD screen and individual volume controls.
- 9. Optional ACT-32H handheld transmitter for improved sound quality.
- Convenient storage compartment and battery charger for ACT-222T handheld microphone.
- 11. 4-segment battery meter for accurate MA-202B battery readings and charging status.
- 3-segment battery meter for accurate ACT-222T battery readings and charging status.
- 13. Receiver volume can be adjusted by MA-202B volume control or wirelessly via ACT-222T.

#### **ACT-222T Features**

- 1. Compact, lightweight and easy to use.
- 2. Quality condenser microphone ensures loud and clear vocal quality.
- 3. Level control allows wireless volume adjustment.
- Can be hand-held or worn as a neck lanyard for hands-free operation.
- 5. Can be re-charged and stored inside the MA-202B.
- 6. Amazing 24 operating hours per charge.

## **Ideal Applications**

- School classrooms
- Places of worship
- Presentations, seminars and meetings
- Day-care activities; playground duty
- Tour guides & paging
- Fire fighters, law enforcement, search & rescue
- Street performers
- Factory or company tours

## **MA-202B Specifications**

	Portal	ble PA	
Max. Power Output	56 Watts		
Amplifier	Class D		
Sensitivity	Typical: 96 dl	B   Maximum: 105 dB	
T.H.D.	< 1 %		
Frequency Response	50 Hz~18 kH	z	
Loudspeaker	1 " Tweeter a	ind 5 " Woofer	
	Wired	6.3 mm (1/4 ")	
Audio Input	Wireless	Single-Channel	
Addio Iriput	Digital Player	USB 2.0 and SD Card Reader	
	Line-In	6.3 mm (1/4 ")	
Volume Control	Wired, Wirele	ess, Line-in & Digital Player	
Installation	Microphone st	tand, table mounted, shoulder belt	
Power Supply	External 100~240V AC switching power supply. Built-in 14.8V/2.6AH rechargeable lithium battery (MB-25)		
Charge Time	Up to 4 hours		
Standby Time	Up to 8 hours		
Battery Indicator	4-level indicator (25/50/75/100%)		
Color	Black		
Dimensions (W × H × D)	163 × 206 × 306 mm (6.4 × 8.1 × 12 ")		
Weight (battery included)	Approx. 3.1 k	rg (6.8 lbs)	
	Wireless	s System	
Receiver	Single-Chann	nel with Scan and ACT Sync	
Frequency Range	480~934 MH	z (country dependent)	
Bandwidth	24 MHz		
Preset Channels	16		
Antenna	Built-in		
Transmitter	ACT-222T   Optional ACT-32H		
	Digital Audio Player		
Player	Built-in USB 2.0 port and SD Card reader		
Patents & Approvals	Patented. Telecom and safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with regulations of different countries.		

## **ACT-222T Specifications**

Oscillation	PLL Synthesized	
Frequency Range	480~934 MHz (country dependent)	
Channel Set-Up	ACT Sync	
Power Output	10~30 mW (country dependent)	
Spurious Emissions	< -55dBc	
Key Feature	Built-in volume level control	
Battery	Rechargeable lithium battery	
Charge Time	Up to 6 hours	
Operating Time	Up to 24 hours	
Dimensions (W × H × D)	182 × 42 × 32 mm (7.1 × 1.6 × 1.3 ")	
Weight	Approx. 128 g (4.5 oz), battery included	
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries	

# Fixed Installation Wireless PA Systems

# Fixed Installation Wireless PA Systems

# MA-101ACT Wireless Classroom PA System

Patents: Taiwan Design 86791 China Design ZL02350861.2





## **Optional Accessories**





MA-101EXP Passive Extension Speaker

Frequency Programmer





MP-101ACT MT-101ACT Mic Charger

MS-11 Wall Mount Bracket

## MA-101ACT Back Panel

# Wall-Mounting Rack Fixed Screw Holes DC Power Socket Switching Power Supply Hanger Trough

## MT-101ACT Controls and Indicators



#### **Profile**

The system is designed so that each teacher can carry their own personal wireless microphone from classroom to classroom. When they enter a new class, they can sync to the MA-101ACT installed in that classroom and they system is

The wireless microphone can be handheld or worn around neck. It allows the teacher to remotely turn the system on & off as well as to adjust the volume wirelessly. An external audio source such as iPod, MP3, CD, DVD or PC can also be connected to the same wireless microphone and heard through the speaker system. A drop-in charger (MP-101ACT) ensures the microphone is always charged and ready to use.

#### **Features**

- 1. Powerful 45 watts output.
- 2. Easy speaker mounting to wall or ceiling.
- 3. Featuring Industry's only all-in-one, versatile MT-101ACT transmitter microphone.
- 4. Compact, ultra-lightweight and powered via rechargeable or disposable alkaline batteries.
- 5. Same MT-101ACT transmitter microphone can be used in up to 97 different rooms.
- 6. Power on/off and volume loudness can be wirelessly remote controlled.
- 7. MT-101ACT can be a handheld or worn as a neck lanyard for hands-free operation with an optional external headset microphone.
- 8. Built-in 3.5mm mini-jack line-input (mono) accepts CD/iPod/MP3 player/tape/mini-disc/computer for
- 9. 24 operating hours per fast charge.

## **Ideal Applications**

- Multiple classrooms
- Multiple meeting rooms
- Tours for factories, companies, theme parks, zoos



Max. Power Output	45 Watts		
Sensitivity	Typical: 94 dB   Maximum: 103 dB		
T.H.D.	< 1%		
Frequency Response	60 Hz~15 kHz		
Loudspeaker	5 " full-range high efficiency		
Power Supply	Built-in 100~240V AC detachable switching power supply		
Dimensions (W × H × D)	190 × 275 × 155 mm (7.5 × 10.8 × 6.1 ")		
Weight	Approx. 2.3 kg (5 lbs)		
Color	Black		
	Wireless System		
Frequency Range 480~934 MHz (country dependent)			
Receiver Channel	Receiver Channel Each swappable module has 97 UHF selectable frequencies		
Transmitter	MT-101ACT		
Audio Inputs	MT-101ACT accepts 3.5 mm Mic or Line audio input		
Transmitter Battery	Detachable rechargeable battery & charger attached		
Charge Time	Up to 3 hours		
Operating Time	Up to 24 hours		
Antenna	Built-in		
Approvals	Patented. Telecom and safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy.  Frequency range and maximum deviation comply with the regulations of different countries.		

# **Model Comparison Chart**

Model	MA-100SB	MA-100DB	MA-101B	MA-202B
	MiPRO 22 SZA	MiPRO 2223 des	MiPRO	
Max. Power Output	50 Watts		45 Watts	56 Watts
Amplifier	Class D		Class AB	Class D
Sensitivity	Typical: 90 dB Maximum: 102 dB		Typical: 95 dB Maximum: 107 dB	Typical: 96 dB Maximum: 105 dB
T.H.D.	< 1%			
Speaker	5 " Full-Range			1 " Tweeter 5 " Woofer
Power Supply	External 100~240V AC	switching power supply	y	
Built-It Battery	Lithium MB-10 x 1		Lithium MB-25 x 1	
Charge Time	Up to 4 hours			
Standby Time	Up to 12 hours	Up to 10 hours	Up to 10 hours	Up to 8 hours
Battery Indicator	4-level Indicator	Single Indicator	3-level Mic & 4-level Amp Indicators	
Line-In	3.5 mm (1/8 ")			6.3 mm (1/4 ")
Line-Out	3.5 mm (1/8 ")			N/A
Mic-In	6.3 mm (1/4 ") × 1			
Installation	Shoulder Strap, Hand Carry , Flat Surface or Microphone Stand			
Tripod Stand	MS-30			
Storage Compartment	N/A			ACT-222T Handheld
Storage Cover	SC-10			SC-20
Dimensions (W × H × D)	135 × 140 × 240 mm (5.3 × 5.5 × 9.4 ")		160 × 178 × 285 mm (6.3 × 7 × 11.2 ")	163 × 206 × 306 mm (6.4 × 8.1 × 12 ")
Approx. Weight (battery included)	1.8 kg (3.9 lbs)	1.9 kg (4.1 lbs)	2.2 kg (4.8 lbs)	3.1 kg (6.8 lbs)
Color	Black, optional White		Grayish Black	Black
		Wireless System		
Maximum Receiver	1	2	1	
Receiver Installation	Built-in Fixed			
Preset Channels	16			
Channel Set-Up	Scan & Sync (ACT)			
Transmitter	ACT-32H Handheld ACT-32T Bodypack			ACT-222T ACT-32H   ACT-32T
Frequency Range	480~934 MHz (country dependent)			
Bandwidth	24 MHz			
		Digital Audio Player		
Built-in USB Port	Yes		N/A	Yes
Digital Audio Player	USB Player & Recorde	er	N/A	USB Player & SD card reader

# **Portable Wireless PA Systems**



# Portable Wireless PA Systems

# MA-303SB Single-Channel Portable Wireless PA System

Patents: Taiwan Utility M339174







# MA-303DB Dual-Channel Portable Wireless PA System

#### **Controls and Indicators**





#### **Transmitters**







ACT-32H

ACT-32T

Remote control

#### **Profile**

MA-303 is a very compact (A4 paper size), fully featured wireless PA system. This rugged yet lightweight system can be easily carried via the built-in handle or mounted on a microphone stand. It is an excellent public address solution for small to medium crowds.

#### **Features**

- 1. Best-in-class performance.
- 2. Ultra light, ultra compact and ultra portable design.
- 3. Powerful and crystal-clear sound projection.
- 4. Wireless receiver with 16 auto-scannable frequencies.
- 5. One-touch Scan & ACT sync button for fast and easy channel set-up.
- 6. Built-in Bluetooth music player for wireless audio
- 7. Built-in USB music player & recorder with LCD
- 8. Built-in alarm siren provides emergency warnings.
- 9. High efficiency class-D amplifier drives 2-way speakers with level limiter.
- AC and lithium rechargeable battery operation.
- 11. Up to 11 hours of stand-by time per 4-hour full charge.
- 12. A smart 4-segment battery meter for accurate battery reading and charging status.
- 13. Available in black or white color.

## **Ideal Applications**

- School classrooms & halls
- Places of worship
- Presentations, seminars and meetings
- Day-care activities; playground duty
- Indoor/outdoor gatherings
- Paging
- Shopping center & trade show presentations and promotions
- Street performers
- Aerobic and fitness centers
- Recreational and social activities

Model		MA-303SB	MA-303DB		
		Portable PA			
Max. Power	Output	60 Watts			
Amplifier		Class D			
Sensitivity		Typical: 92 dB   Maxi	mum: 102 dB		
T.H.D.		< 1%			
Frequency Response		50 Hz~18 kHz			
Speaker		1 " Tweeter & 5 " Woof	er		
A !	Wired	6.3 mm (1/4 ")			
Audio Inputs	Line-In	3.5 mm (1/8 ")			
Audio Outpu	t	3.5 mm (1/8 ")			
Installation		Microphone stand, table	mounted, shoulder belt		
_	AC	External 100~240V AC	switching power supply		
Power Supply	DC & Battery	Built-in 14.8V/2.6AH recl			
Charge Time	)	Up to 4 hours (automatic	charging management)		
Standby Tim	е	Up to 11 hours	Up to 9 hours		
Battery Indic		4-level indicator (25/50	/75/100%)		
Color		Black, White			
Dimensions (W × H × D)		210 × 276 × 165 mm (8.3 × 11 × 6.5 ")			
Weight (battery inclu	ıded)	Approx. 2.7 kg (6 lbs) Approx. 2.8 kg (6.2 lbs)			
Color		Black or white option			
		Wireless System			
Receiver Ch	annel	Single Dual			
Frequency R	Range	480~934 MHz (country dependent)			
Bandwidth		24 MHz			
Preset Chan	nels	16			
Channel Set	-up	Scan & ACT sync			
Transmitter		ACT-32H Handheld   ACT-32T Bodypack			
Antenna		Built-in			
		Audio Player			
Built-in USB	Port	Yes			
Built-in Bluetooth Music Player		Yes			
USB Play & Record		LCD displays track name, number, time, recording status.			
Patents & Approvals		Patented. Telecom and safety regulations approved.			
Notes		Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with regulations of different countries.			

# Portable Wireless PA Systems

# MA-505 Portable Wireless PA System





#### **Transmitters**





ACT-

ACT-32T

## **Controls and Indicators**



## **Optional Accessories**









CDM-3A
CD/USB Player&Recorder Module

**CDM-2** CD/USB Player Module **CDM-2A** CD Player Module

//RM-70B ceiver Module

MT-91
nterlinking Transmitter Module

#### **Profile**

MA-505 delivers unparalleled audio performance and craftsmanship. The rugged one-piece speaker cabinet houses a high efficient class-D amplifier that drives high sensitivity two-way loudspeakers and limiter circuitry reduces distortion and increases intelligibility for powerful and clear sound. Choice of digital audio players & recorders for playback and interlinking transmitter/receiver package for extended transmission range. It offers an ideal public address solution for medium crowds.

#### **Features**

- MA-505 is the culmination of years of wireless PA design.
- 2. 145-watt power of loud and clear sound via high efficient class-D amplifier.
- Rugged one-piece molded enclosure houses 1 " titanium compression driver & 8 " woofer.
- 4. Powerful and crystal-clear sound projection.
- 5. Built-in or detachable receiver module option.
- 6. Wireless receiver with 16 auto-scannable frequencies.
- One-touch Scan & ACT sync button for fast and easy channel set-up.
- Built-in Bluetooth music player for wireless audio streaming.
- 9. A voice priority feature that mutes the music when wireless microphone is used.
- 10. Built-in one-button alarm/siren for warning of threats.
- Built-in AC switching power supply for universal usage and fast battery charge.
- 12. A smart 4-segment battery meter for accurate battery reading and charging status.
- Industry's only MT-91 wireless interlinking transmitter option to interlink multiple MA-505 portables wirelessly to extend transmission range and expand coverage.
- 14. Built-in cable storage compartment.
- 15. AC and lithium rechargeable battery operation.
- 16. Up to 8 hours of stand-by time per 4-hour full charge.
- 17. Available in black or white color.

## **Ideal Applications**

- School classrooms & halls
- Places of worship
- Presentations, seminars and meetings
- Day-care activities;
   playground duty
- Indoor/outdoor gatherings
- Weddings & funeral services
- Shopping center & trade show presentations and promotions.
- Street performers
- Aerobic and fitness centers
- Recreational and social activities

		ble PA	
Power Output	100W(rms)/ $4\Omega$ , 145W(max)/ $4\Omega$		
Amplifier	Class D		
Sensitivity	Typical: 91 dB   Maximum: 109 dB		
T.H.D.	< 1%		
Frequency Response	50 Hz~18 kHz		
Speaker	Tweeter	1 " Tweeter	
	Bass	8 " Woofer	
	Wired	XLR balanced & unbalanced 6.3 Ø mm (1/4 ")	
Audio Inputs	Wireless	Up to 4. 2 Built-in & 2 External Detachable	
	Audio Player	Built-in DPM-3 or optional CDM-2   CDM-2A   CDM-3A	
	Line-In	3.5 Ø mm (1/8 ") mini-jack	
Bluetooth Connectivity	Yes		
Audio Output	3.5 Ø mm (1/8	") mini-jack	
Extension Speaker	Unbalanced 6.	3 Ø mm (1/4 ") jack	
Volume	Individual volu	me control	
Functions	VOP, Tone co	ntrol or optional Echo control	
Alarm Siren	Siren sound w	ith fade-in mode	
Storage	For AC power	cable	
Installation	Hand carry, Fl	at surface or on a speaker stand.	
D 0	AC	Built-in 100~240V AC switching power supply	
Power Supply	DC & Battery	External DC connector. Built-in 25V/4.5A rechargeable lithium	
Charge Time	Up to 4 hours	(automatic charging management)	
Standby Time	Up to 8 hours		
Battery Indicator	4-level LED in	dicator (25/50/75/100%)	
Color	Black, White		
Dimensions (W × H × D)	285 × 400 × 22	25 mm (11.2 × 15.7 × 8.9 ")	
Weight (battery included)	Approx. 8.5 kg	(18.7 lbs)	
	Wireles	s System	
Detachable Module	1 or 2 MRM-70	)B	
Receiver	AutoScan & ACT sync		
Built-in Fixed	1 or 2	OT avera	
Receiver	AutoScan & A		
Frequency Range Preset Channels &	480~934 MHZ	(country dependent)	
Bandwidth		nnels in 24 MHz frequency band.	
Antenna	Built-in proprietary active high efficiency antenna		
Transmitter	ACT-32H Handheld   ACT-32T bodypack		
Microphone	MM-107		
Interlinking Transmitter	MT-91 module		
Installation Plug-n-play for optional modules			
	Digital Au	ıdio Player	
Audio Player	DPM-3, CDM-3A, CDM-2, CDM-2A		
Audio Remote Control	DPM-3 – detachable or on-board		
Patents & Approvals	Patented. Telecom & safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy.  Frequency range and maximum deviation completes the complete of the		
	with the regulations of different countries.		

# Portable Wireless PA Systems

# MA-705 Portable Wireless PA System



## **Transmitters**





ACT-32H

ACT-32T

## **Controls and Indicators**



## **Optional Accessories**









**Profile** 

Boasting more than ten years of mass production, MA-705 remains a product leader due to its compact, rugged and reliability design. This system delivers loud and clear sound quality and is ideal for small to medium crowds.

#### **Features**

- 1. Delivers a powerful 70 Watts of high fidelity and high efficient sound through full range speaker.
- 2. Lightweight, compact & sleek design. Install on a speaker stand, flat surface or hand carried.
- 3. Detachable receiver module option.
- 4. Wireless receiver with 16 auto-scannable frequencies.
- 5. One-touch Scan & ACT sync button for fast and easy channel set-up.
- 6. A voice priority feature that mutes the music when wireless mic is used.
- 7. Built-in AC switching power supply for universal usage and fast battery charge.
- 8. AC and rechargeable battery operation.

## Ideal Applications

- School classrooms & halls
- Places of worship
- Presentations, seminars and meetings
- Day-care activities; playground duty
- Indoor/outdoor gatherings
- Weddings & funeral services
- Shopping center & trade show presentations and promotions
- Street performers
- Aerobic and fitness centers
- · Recreational and social activities

	Porta	ble PA	
Max. Power Output	70 Watts		
Amplifier	Class AB		
Sensitivity	Typical: 95 dB   Maximum: 108 dB		
T.H.D.	< 1%		
Frequency Response	50 Hz~18 kH	łz	
Speaker	8 " full-range		
	Wired	Combo XLR & 6.3 mm (1/4 ")	
Audio Inputo	Wireless	Up to 2 wireless microphones	
Audio Inputs	Audio Player	CDM-2   CDM-2A   CDM-3A	
	Line-In	Unbalanced RCA jack	
Audio Output	Unbalanced	line RCA jack	
Extension Speaker	6.3 mm (1/4	") Phone jack	
Volume	Master and o	other individual controls	
Controls	Tone control	, Echo control on wireless mics	
Installation	Speaker star	nd, flat surface or fixed handle	
	AC	Built-in 100~240V AC switching power supply	
Power Supply	DC & Battery	12V/2.9AH rechargeable gel cell battery	
Charge Time	Up to 6 hours	(automatic charging management)	
Standby Time	Up to 7 hour	s	
Battery Indicator	Single LED I	ndicator	
Dimensions (W × H × D)	285 × 400 ×	225 mm (11.2 × 15.7 × 8.9 ")	
Weight (battery included)	Approx. 9.8 I	kg (21.6 lbs)	
	Wireles	s System	
Receiver	MRM-70B		
Max. Receiver	Up to 2		
Transmitter	ACT-32H Ha	indheld   ACT-32T Bodypack	
Microphone	MM-107 Wired Dynamic Microphone		
Installation	Plug-in Module		
Antenna	Built-in		
	Digital Au	ıdio Player	
Model	CDM-2   CDM-2A   CDM-3A		
Installation	Detachable Module		
Patents & Approvals	Patented. Telecom & safety regulations approved		
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.		
	1,7		

# Portable Wireless PA Systems

# MA-707 Portable Wireless PA System



#### **Transmitters**

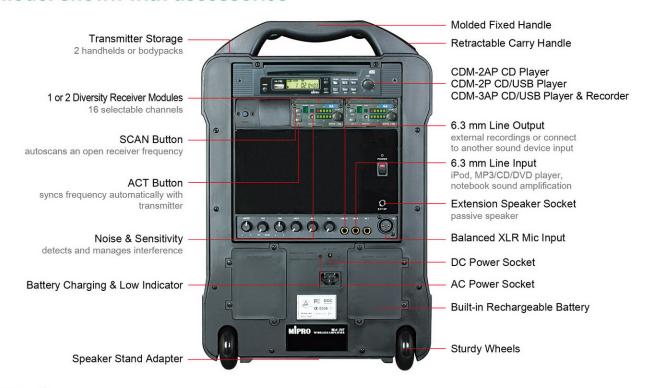




**ACT-32H** 

ACT-32T

## Model shown with accessories



## **Optional Accessories**





CDM-2AP CD Player Module



**11-3AP** CD/USB Player/Recorder Module

**Profile** 

For over 17 years, MA-707 has been mass-produced and sold in over 80 countries and it remains a market-leading system as MIPRO ensures product design, craftsmanship and reliability are second to none. MA-707 is a popular, versatile and rugged system that can be used indoors and outdoors and provides excellent full range music reproduction as well as quality intelligible speech. It offers an ideal public address solution for medium to large crowds.

#### **Features**

- 1. Delivers a powerful 100 Watts audio output.
- 2. Up to 2 optional diversity receiver module with 16 auto-scannable frequencies.
- One-touch Scan for a clear, interference-free frequency.
- 4. One-touch ACT syncs the transmitter and receiver frequency automatically.
- 5. Interference warning indicator.
- 6. Built-in retractable handle and sturdy wheels ensure easy transport.
- 7. Built-in compartment storage for up to 2 handheld or bodypack transmitters.
- 8. Detachable digital audio player & recorder option.
- Built-in AC switching power supply for universal usage and fast battery charge.
- 3 power modes: AC, rechargeable battery and DC iack.

## **Ideal Applications**

- Schools
- Places of worship
- Presentations, seminars and meetings
- Shopping center & trade show presentations and promotions
- Aerobic & fitness centers
- Parades & fetes
- Street performers
- Park and recreational facilities
- Emergency interventions
- Weddings & funeral services
- Public auctions

	Porta	ble PA	
Max. Power Output	100 Watts		
Amplifier	Class AB		
Sensitivity	Typical: 98 dB   Maximum: 111 dB		
T.H.D.	< 1%		
Frequency Response	50 Hz~18 kHz		
Speaker	8 " full-range		
	Wired	XLR × 1 & 6.3mm (1/4 ") × 1	
Audio Inputs	Wireless	Up to 2 wireless microphones	
Addio inputs	Audio Player	CDM-2P   CDM-2AP   CDM-3AP	
	Line-In	Unbalanced 6.3mm (1/4 ") jack	
Audio Output	Unbalanced	Line 6.3mm (1/4 ") jack	
Extension Speaker	6.3 mm (1/4	") Phone jack	
Volume	Master and o	other individual controls	
Controls	Tone control		
Storage	2 handheld o	or bodypack transmitters	
Installation	Speaker star handle & wh	nd, flat surface or retractable eels	
Bower Supply	AC	Built-in 100~240V AC switching power supply	
Power Supply	DC & Battery	24~32 DC, 12V/4.5AH rechargeable gel cell battery	
Charge Time	Up to 8 hours	(automatic charging management)	
Standby Time	Up to 8 hours	s	
Battery Indicator	Single LED I	ndicator	
Dimensions (W × H × D)	310 × 445 ×	240 mm (12.2 × 17.5 × 9.4 ")	
Weight (battery included) Approx. 14.8 kg (32.5 lbs)		kg (32.5 lbs)	
	Wireless	s System	
Receiver	MRM-70		
Max. Receiver	Up to 2		
Transmitter	ACT-32H Ha	indheld   ACT-32T Bodypack	
Microphone	MM-107 Wire	ed Dynamic Microphone	
Installation	Plug-in Module		
Antenna	Built-in		
	Digital Au	ıdio Player	
Model CDM-2P   CDM-2AP   CDM-3AP		CDM-2AP   CDM-3AP	
Installation	Plug-in Module		
Patents & Approvals	Patented. Telecom & safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.		

# Portable Wireless PA Systems

# MA-708 Portable Wireless PA System



#### **Transmitters**



## Model shown with accessories



## **Optional Accessories**











Portable PA



CDM-3A USB/SD Player&Recorder Module CD/USB Player&Recorder Module

CDM-2A CD Player Module

MTM-92

#### **Profile**

Bringing a host of impressive features and functionalities, the MA-708 is an undisputed market leader in its class.

MA-708 delivers unparalleled audio performance and craftsmanship. The rugged one-piece speaker cabinet houses a high efficient class-D amplifier that drives high sensitivity two-way loudspeakers and limiter circuitry reduces distortion and increases intelligibility for guaranteed powerful and clear sound. It offers an ideal public address solution for medium to large crowds.

#### **Features**

- 1. Lightweight Class-D amplifier produces 190-watt audio
- 2. 1 " titanium compression driver & 8 " woofer.
- 3. Industry's only master level control enables volume be wirelessly controlled by an optional ACT-32HR transmitter microphone instead of a separate remote.
- 4. Up to 4 optional diversity receiver modules with 16 auto-scannable frequencies.
- 5. One-touch Scan & ACT sync button for fast and easy channel set-up.
- 6. Retractable handle and sturdy wheels for easy transport.
- 7. Built-in storage compartment for 2 HH or BP
- 8. A voice priority feature that mutes the music when wireless microphone is used.
- 9. Built-in AC switching power supply for universal usage and fast battery charge.
- 10. A smart 4-segment battery meter for accurate battery reading and charging status.
- 11. Industry's only MTM-92 transmitter option for interlinking multiple MA-708 portables wirelessly to extend transmission range & expand coverage.
- 12. Optional lithium rechargeable battery pack for direct replacement of existing battery. Lithium battery offers superior cycle life, half the weight and environmental
- 13. 3 power modes: AC, rechargeable battery and DC jack.
- 14. Suitable for tripod, floor or desk mount
- 15. Available in black or white color

## **Ideal Applications**

- · School sports events and marching bands
- Large meetings and public gatherings
- · Presentations, seminars and meetings
- Shopping center presentations and promotions
- Street performers
- Parades & fetes

· Aerobic & fitness centers

Places of worship

- · Park and recreational facilities
- Emergency and rescue situations
- · Weddings & funeral services
- Public auctions

	Porta	ble PA	
Max. Power Output	190 Watts		
Amplifier	Class D		
Sensitivity	Typical: 89 dB   Maximum: 108 dB		
T.H.D.	< 1%		
Frequency Response	50 Hz~18 kHz		
	Tweeter	1 " Compression Driver	
Speaker	Bass	8 " Woofer	
	Wired	XLR × 1 & 6.3 mm (1/4 ") × 1	
	Wireless	Up to 4 wireless microphones	
Audio Inputs	Audio Player	CDM-2A   CDM-2   CDM-3A DPM-3	
	Line-In	Unbalanced RCA jack	
Audio Output	Unbalanced	Line RCA jack	
Extension Speaker	6.3 mm (1/4	") Phone jack	
Master Volume Control	Manually or \	Wirelessly via ACT-32HR	
Controls	Tone, Voice	priority & Echo on wireless mics	
Storage	2 handheld c	or bodypack transmitters	
Installation	Speaker star	nd, flat surface or retractable eels	
Davies Cumbi	AC	Built-in 100~240V AC switching power supply	
Power Supply	DC & Battery	24~32 DC, 12V/4.5AH rechargeable gel cell battery	
Charge Time	Up to 8 hours	(automatic charging management)	
Standby Time	Up to 7 hours	s	
Battery Indicator	4-level indica	ator (25/50/75/100%)	
Color	Black, White		
Dimensions (W × H × D)	336 × 545 × 325 mm (13.2 × 21.5 × 12.8 ")		
Weight (battery included)	Approx. 16.3 kg (36 lbs)		
	Wireless	s System	
Receiver	MRM-70B	MRM-72B	
Max. Receiver	Up to 4 (MRI	M-70B × 2 + MRM-72B × 1)	
Transmitter	ACT-32H	ACT-32HR   ACT-32T	
Microphone	MM-107 Wired Dynamic Microphone		
Interlinking Transmitter	MTM-92		
Installation	Plug-in Module		
Antenna	Built-in		
	Digital Au	ıdio Player	
Model	CDM-2A   CDM-2   CDM-3A   DPM-3		
Installation	Plug-in Module		
Patents & Approvals	Patented. Tele	ecom & safety regulations approved	
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation		
	comply with the regulations of different countries		

# Portable Wireless PA Systems

# MA-808 Portable Wireless PA System



Patents: Taiwan Design D112612 China Design ZL200530143378.9

#### **Transmitters**



### Model shown with accessories



## **Optional Accessories**











Portable PA



CDM-3A USB/SD Player&Recorder Module CD/USB Player&Recorder Module

CDM-2A CD Player Module

MTM-92

#### **Profile**

MA-808 is the flagship and ultimate wireless PA system and brings a host of impressive features and functionalities.

MA-808 delivers unparalleled audio performance and craftsmanship. The rugged one-piece speaker cabinet houses a high efficient class-D/AB amplifiers that drive high sensitivity two-way loudspeakers and limiter circuitry reduces distortion and increases intelligibility for guaranteed powerful and clear sound. It offers an ideal public address solution for large crowds.

#### **Features**

- 1. Lightweight Class-D amplifier produces 267-watt audio
- 2. 1.5 " titanium compression driver & 10 " woofer.
- 3. Industry's only master level control enables volume be wirelessly controlled by an optional ACT-32HR transmitter microphone instead of a separate remote.
- 4. Up to 4 optional diversity receiver modules with 16 auto-scannable frequencies.
- 5. One-touch Scan & ACT sync button for fast and easy channel set-up.
- 6. Retractable handle and sturdy wheels for easy transport.
- 7. Built-in storage compartment for 2 HH or BP transmitters.
- 8. A voice priority feature that mutes the music when wireless microphone is used.
- 9. Built-in AC switching power supply for universal usage and fast battery charge.
- 10. A smart 4-segment battery meter for accurate battery reading and charging status.
- 11. Industry's only MTM-92 transmitter option for interlinking multiple MA-808 portables wirelessly to extend transmission range & expand coverage.
- 12. Optional lithium rechargeable battery pack for direct replacement of existing battery. Lithium battery offers superior cycle life, half the weight and environmental.
- 13. Speakon extension speaker output (use with MA-
- 14. 3 power modes: AC, rechargeable battery and DC jack.
- 15. Suitable for tripod, floor or desk mount.

## **Ideal Applications**

- · School sports events and marching bands
- Large meetings and public gatherings
- · Presentations, seminars and meetings
- Shopping center presentations and promotions
- Places of worship
- · Aerobic & fitness centers
- Parades & fetes
- Street performers
- Park and recreational facilities
- Emergency and rescue situations
- Weddings & funeral services
- Public auctions

	Porta	DIE PA	
Max. Power Output	267W: 190W	(woofer)   77W (tweeter)	
Amplifier	Class D & Class AB		
Sensitivity	Typical: 96 dB   Maximum: 111 dB		
T.H.D.	< 1%		
Frequency Response	50 Hz~18 kHz		
0	Tweeter	1.5 " Compression Driver	
Speaker	Woofer	10 " Neodymium	
	Wired	XLR × 1 & 6.3 mm (1/4 ") × 1	
	Wireless	Up to 4 wireless microphones	
Audio Inputs	Audio Player	CDM-2A   CDM-2   CDM-3A DPM-3	
	Line-In	Unbalanced RCA jack	
Audio Output	Unbalanced	Line RCA jack	
Extension Speaker	Speakon out	put	
Master Volume Control		Wirelessly via ACT-32HR	
Controls	Tone, Voice	priority & Echo on wireless mics	
Storage		or bodypack transmitters	
Installation		nd, flat surface or retractable	
D 0 1	AC	Built-in 100~240V AC switching power supply	
Power Supply	DC & Battery	24~32 DC, 12V/4.5AH rechargeable gel cell battery	
Charge Time	Up to 8 hours	(automatic charging management)	
Standby Time	Up to 6 hours	s	
Battery Indicator	4-level indica	ator (25/50/75/100%)	
Color	Black, White		
Dimensions (W × H × D)	360 × 560 ×	350 mm (14.2 × 22 × 13.8 ")	
Weight (battery included)	Approx. 20.5	kg (45 lbs)	
	Wireless	s System	
Receiver	MRM-70B	MRM-72B	
Max. Receiver	Up to 4 (MRI	M-70B × 2 + MRM-72B × 1)	
Transmitter	ACT-32H	ACT-32HR   ACT-32T	
Microphone	MM-107 Wire	ed Dynamic Microphone	
Interlinking Transmitter	MTM-92		
Installation	Plug-in Module		
Antenna	Built-in		
	Digital Au	idio Player	
Model	CDM-2A   CDM-2   CDM-3A   DPM-3		
Installation	Plug-in Module		
Patents & Approvals	Patented. Telecom & safety regulations approved		
Notes	Refer to actual product in the event of product description discrepancy.  Frequency range and maximum deviation comply with the regulations of different countries.		

# Portable Wireless PA Systems

# MA-909 Wireless Mixer

The MA-909 is a breakthrough in the traditional design concept of wireless PA systems. Essentially, it separates the control mixer from the amplified speaker system. The mixed audio signals from the MA-909 can be transmitted wirelessly to inter-linking receiver modules installed in one or more remote active speaker systems (MA-705PA, MA-707PA, MA-708PA, MA-808PA) thus allowing the mixer to be set up in any desired location without the need for bulky and inconvenient connecting cables.

It's an ideal interface for hundreds of applications including existing in-wall school audio systems, remote broadcast setups, press conferences, hotel facilities, live sound, weddings, pep rallies, assemblies, and much more. The MA-909 is the perfect solution for any application requiring flexibility, convenience and performance with excellent results.



#### **Features**

- EIA Standard 2U metal case equipped with plugin dual UHF wireless receivers, CD player, wired microphone jack, LINE-IN jack of other audio sources and LINE-IN/OUT jack of recorder.
- 2. A wired microphone, two wireless microphones, CD/DVD players, and other audio sources can be mixed simultaneously to the input.
- 3. 16 preset channels.
- 4. Modular design for interlinking wireless receiver allows being built-in or mounted on active speaker systems.
- 5. The active speaker systems with an interlinking receiver module installed allow unlimited expansion or change of setup position within transmitting range.

## **Optional Accessories**

## **MRM-70B**

## Receiver Module

- 1. 16 preset channels
   2. Autoscan and ACT ™ sync
- Modularized design

## **MT-92**

#### **Interlink Transmitter Module**

- 1. 16 preset channels
- 2. Autoscan
- 3. Modularized design

## MR-90B

#### **Interlink Receiver Module**

**Specifications** 

Microphones

Audio Plaver

Power Supply

Exterior Color

Dimensions

 $(W \times H \times D)$ 

Weight

T.H.D.

- 1. 16 preset channels to match MT-92
- 2. LCD displays operating status
- 3. Modularized design

## CDM-2

Plug-in 2 UHF detachable receiver modules

Built-in 100~240V AC switching power supply

Refer to actual product in the event of product

420 × 44 × 200 mm (16.5 × 1.7 × 7.9 ")

Matching Transmitters ACT-32H Handheld, ACT-32T Bodypack

CDM-2 (CD + USB)

Receiver Antennas Rear Panel, Detachable

< 0.5%

Wireless Transmitter MT-92: Preset 16 frequencies

Frequency Response 50 Hz~15 kHz

MM-107 Wired Microphone

Audio Input Sockets Balanced, Unbalanced Mic & Line-in / Line-out

Approx. 5.2 kg (11.5 lbs)

description discrepancy

## **CD/USB Player Module**

- Plays CD and USB flash disk
   Selection and Search
- Selection and Search
   Programmable tracks
- 4. Random & repeat playback
- 5. USB 2.0 port
- Select tracks by number
   Remote control included





# **DPM-3F** Digital Player/Recorder Module Frame

NEW



#### **Profile**

DPM-3F is an EIA-standard 19 " 1U metal module frame which fits MIPRO digital audio players & recorders. Various of input and output jacks enables recordings or signal output to a mixer or integrated amplifier.

#### **Features**

- 1. EIA-standard rack-mountable 19 " 1U metal module frame.
- 2. Accepts MIPRO DPM-3, CDM-2, CDM-2A, CDM-3A.
- 3. REC INPUT stereo RCA jack input for external audio sources and can be used with MIPRO DPM-3, CDM-3A for recording.
- 4. LINE OUTPUT RCA jack stereo output to a mixer or integrated amplifier.
- 5. VIDEO OUTPUT socket interfaces with an external recordable device.
- 6. 6.3mm headphone monitoring jack with volume control

## **Specifications**

Input Sensitivity	RCA jack, 10K $\Omega$ impedance, Maximum input -2dBV
Headphone Output	6.3 Ø mm, impedance 30Ω/50mW × 2
T.H.D.	< 0.1%
S/N Ratio	>103dB
Current Consumption ( excluding CD )	50mA
Power	DC12 ~ 15V
LINE Output	1V rms

# **Model Comparison Chart**

Model		MA-303SB	MA-303DB	MA-505	MA-705	MA-707	MA-708	MA-808	
		MidBO	Midao	MIPRO	MPRO	MiPro	libao	MiPro	
Max. Power	Output	60 Watts		145 Watts	70 Watts	100 Watts	190 Watts	267 Watts	
Sensitivity		Typical: 92 dB Maximum: 102	dB	T: 91 dB M: 109 dB	T: 95 dB M: 108 dB	T: 98 dB M: 111 dB	T: 89 dB M: 108 dB	T: 96 dB M: 111 dB	
Amplifier		Class D			Class AB		Class D	Class AB + D	
Speaker		1 " Tweeter + 5	" Woofer	1 " Tweeter & 8 " Woofer	8 " Full-Range	8 " Full-Range		1.5 " Compression Driver & 10 " Woofe	
Power Metho	od	AC Power , Rech & DC input	argeable Battery	AC Power , Rechargeable Battery & DC input	AC Power, Rechargeable Battery	AC Power , Re	AC Power , Rechargeable Battery & DC input		
Power Suppl	ly	External		Built-in					
Built-in Batte	ry	Lithium MB-10 x 1		Lithium MB-35 x 1	Sealed Lead-Acid MB-30 x 2		Sealed Lead-Acid MB-70 x 2 (optional LFP MB-80)		
Charge Time	•	Up to 4 hours			Up to 6 hours	Up to 8 hours			
Standby Tim	е	Up to 11 hours	Up to 9 hours	Up to 8 hours	Up to 7 hours	Up to 8 hours	Up to 7 hours	Up to 6 hours	
Battery Indic	ator	4-level Indicator			Single Indicator	4-level Indicator		٢	
Line-In		3.5 mm (1/8 ") × 1			Single RCA × 1	6.3mm (1/4") × 1	Single RCA × 1	ngle RCA × 1	
Line-Out		3.5 mm (1/8 ") ×	: 1		Single RCA × 1	6.3mm (1/4") × 1 Single RCA × 1			
Mic-In		6.3 mm (1/4 ") ×	: 1	XLR & 6.3 mm × 1	Combo × 1	XLR & 6.3 mm (1/4 ") × 1			
Voice Over Priority		N/A		Yes		N/A Yes			
Echo Control		N/A		N/A	Yes	N/A	Yes		
Tone Control		N/A		Yes					
Retractable Handle & Wheels			,	Yes					
Transport		Molded Fixed H	andle			Retractable har	Retractable handle and wheels		
Tripod Stand	ı	MS-30		MS-70					
Storage Compa	artment	N/A				2 Handhelds	2 Handhelds or	2 Bodypacks	
Storage Cov	er	SC-30		SC-50		SC-70 SC-75 SC-80			
Extension Sp	beaker	Yes							
Dimensions	mm	210 × 276 × 165	5	285 × 400 × 225	285 × 400 × 225	310 × 445 × 240	336 × 545 × 325	360 × 560 × 350	
$(W \times H \times D)$	inches	8.3 × 11 × 6.5		11.2 × 15.7 × 8.9	11.2 × 15.7 × 8.9	12.2 × 17.5 × 9.4	13.2 × 21.5 × 12.8	14.2 × 22 × 13.8	
Approx. Weig (battery inclu		2.7 kg (6 lbs)	2.8 kg (6.2 lbs)	8.5 kg (18.7 lbs)	9.8 kg (21.6 lbs)	14.8 kg (32.5 lbs)	16.3 kg (36 lbs)	20.5 kg (45 lbs)	
				Wireless S	System				
Maximum Re	eceiver	1	2	Up to 4	Up to 2		Up to 4		
Receiver Installation		Built-in	Built-in & Plug-in Module						
Preset Channels		16							
Channel Set-Up Scan & Sync (AC		CT)							
Transmitter ACT-32H Handheld ACT-32T Bodypack					ACT-32H   ACT-32HR Handheld ACT-32T Bodypack				
Frequency R	Range	480~934 MHz (	country depende	ent). 24 MHz band	dwidth				
Wireless Interlinking Transmitter		N/A		Optional MT-91				92	
				Audio Pl	ayer				
Digital Audio	Player	USB Player & R (built-in)	ecorder	CDM-2, CDM-2A, CDM-3A ,DPM-3 (optional)	CDM-2, CDM-2A, CDM-3A (optional)	CDM-2P, CDM-2AP, CDM-3AP (optional)	CDM-2, CDM-2 CDM-3A ,DPM- (optional)		

# **Accessories**

- **30** Receiver Modules & Interlinking Transmitters
- 32 Digital Audio Players & Recorders
- 33 Transmitters
- 36 Headworn Microphones
- 38 Lavalier Microphones
- 39 Rechargeable Batteries
- 40 Rechargeable Batteries & Other Accessories



## **Accessories - Receiver Modules**

# Accessories - Interlinking Transmitter

## MRM-70B | MRM-72B



## **Diversity Receiver Module**

The modular plug-and-play design allows for fast and easy installation or replacement of MIPRO MA-505, MA-705, MA-707, MA-708 and MA-808 portable PA systems. Installation or replacement takes less than a minute.





MRM-70B

24 MHz

< 82 dB

> 100 dBA

610 mV rms 12~15 V DC

<250 mA

-10~+60°C

16

Single-Channel

PLL Synthesized

Scan and ACT sync

6 dB  $\mu$  V, at S/N > 80 dB

480~934 MHz (country dependent)

CPU-controlled diversity receiving

60 Hz~15 kHz (Overall system)

<0.5% @ 1kHz ( Dev.=32kHz )

75 × 35 × 141 mm (3.0 × 1.4 × 5.6 ")

Refer to actual product in the event of product description discrepancy

Approx. 126 g (4.4 oz)

"PiloTone & NoiseLock" dual-squelch circuits

MRM-72B

#### **Features**

- 1. Advanced diversity technology for optimum reception quality.
- 2. Preset with 16 auto-scannable frequencies.
- 3. One-touch Scan for a clear, interferencefree frequency.
- 4. One-touch ACT ™ syncs the transmitter and receiver frequency automatically.
- 5. Interference warning indicator.
- 6. "Sensitivity" adjustor can be adjusted to minimize interference.
- 7. Easy-to-read LED channel display.
- 8. 5-segment RF and Audio meters.
- 9. Dual "PiloTone & NoiseLock" circuits minimize interference.

# 10. Modularized design allows easy installation and replacement. 11. When installed, master level control enables volume be wirelessly controlled by an ACT-32HR transmitter microphone instead of a separate remote. (MA-708 & MA-808 portables) MRM-72B **Dual-Channel** Channel, RF & audio meters and interference warning indicator ACT-32H | ACT-32T | ACT-32HR (MA-708 & MA-808 only)

220 × 57 × 190 mm (8.7 × 2.2 × 7.5 ")

Approx. 622 g (22 oz)

# MT-91 Interlinking Transmitter Module





#### **Features**

- 1. 16 selectable channels.
- 2. Numeric LED display.
- 3. Modularized design allows easy installation and replacement.
- 4. Fits MA-505 portables

## **Specifications**

Frequency Range	480~934 MHz (country dependent)		
Oscillation Mode	PLL Synthesized		
Bandwidth	24 MHz		
RF Output Power	10 / 100 mW switchable (country dependent)		
Spurious Emissions	< -45 dBm		
Dimensions (W × H × D)	75 × 35 × 165 mm (2.9 × 1.4 × 6.4 ")		
Weight	Approx. 85 g (3 oz)		
Note	Refer to actual product in the event of product description discrepancy.		

# MT-92 | MTM-92 Interlinking Transmitter Module





MT-92

#### **Features**

- 1. 16 selectable channels
- 2. Numeric LED display.
- 3. Modularized design allows easy installation and replacement.
- 4. MTM-92 fits MA-708 or MA-808 portables.

## **Specifications**

Frequency Range	480~934 MHz (country dependent)
Oscillation Mode	PLL Synthesized
Bandwidth	24 MHz
RF Output Power	10 / 100 mW switchable (country dependent)
Spurious Emissions	< -45 dBm
Dimensions	MT-92: 65 × 34.5 × 165 mm (2.5 × 1.3 × 6.4 ")
$(W \times H \times D)$	MTM-92:220 × 57 × 190 mm (8.6 × 2.2 × 7.5 ")
\Moight	MT-92 : Approx. 80 g (2.8 oz)
Weight	MTM-92 : Approx. 410 g (14.5 oz)
Note	Refer to actual product in the event of
NOIG	product description discrepancy.



**Specifications** 

Receicer Channel

Frequency Range

Oscillation Mode

**Preset Channels** 

Channel Set-up

Squelch Control

Spurious Emissions

Frequency Response

**Display Status** 

Sensitivity

S/N Ratio

AF Output

Power Supply

**Transmitters** 

Weight

Note

Current Consumption

Operating Temperature

Dimensions (W × H × D)

T.H.D.

Bandwidth

Model

# **Accessories - Audio Players**

# **Accessories - Transmitters**

## **DPM-3** USB/SD Player & Recorder Module









- 1. Records from Line-input into SD card or USB.
- 2. USB 2.0 port / SD / SDHC card.
- 3. Can repeat specified period for language learning function.
- 4. Support up to 999 folders or 999 tracks storage in USB or SD card.
- 5. Single track can be deleted during playback.
- 6. Song management by music folders.
- 7. Equalizer modifies bass, treble and other sonic.
- 8. Several Repeat options.
- 9. Fast track search. Fast forward/reverse search.
- 10. Remote control can be operated on-board or detached from panel.
- 11. Fits MA-708 or MA-808 portables.

# CDM-3A | CDM-3AP CD/USB Player & Recorder Module





NEW

- 1. Supports MP3/WMA/CD/CD-R/CD-RW formats
- 2. Records from Line-input into USB.
- 3. Supports USB 1.1 host interface and up to 16 GB USB disk.
- 4. Can repeat specified period for language learning function.
- 5. Single track can be deleted during playback.
- 6. Song management by music folders.
- 7. Repeat, Fast forward/reverse search.
- 8. CDM-3A fits MA-505, 705, 708, 808 portables.
- 9. CDM-3AP fits MA-707 portables.

#### CDM-2 | CDM-2P **CD/USB Player Module**

CDM-3AP











- 1. Plays standard CD and USB flash disk.
- 2. Selection and Search.
- 3. Random & repeat playback.
- 4. USB 2.0 port.
- 5. Wireless remote control included.
- 6. CDM-2 fits MA-505, MA-705, MA-708, MA-808
- 7. CDM-2P fits MA-707.

# CDM-2A | CDM-2AP CD Player Module NEW





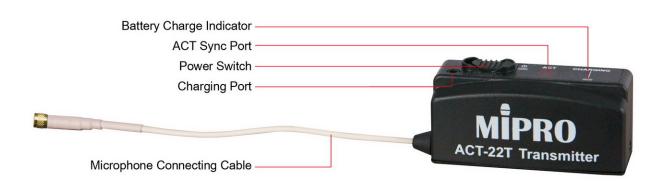




1. Plays standard CD.

- 2. Selection and Search.
- 3. Programmable tracks.
- 4. Random & repeat playback.
- 5. Wireless remote control included.
- 6. CDM-2A fits MA-505, MA-705, MA-708, MA-808.
- 7. CDM-2AP fits MA-707.

# **ACT-22T** Miniature Headworn Transmitter



#### **Profile**

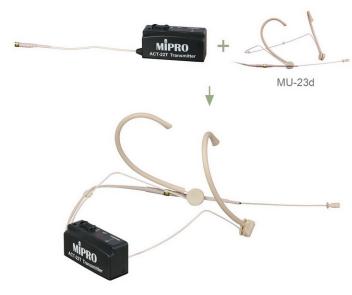
MIPRO introduces ACT-22T, an ultra compact, miniature transmitter. This true wireless solution offers a hands-free operation without cable entanglement and additional bodypack and poor connection problems when integrated with a headworn microphone.

The ACT-22T utilizes PLL synthesized technology for increased RF stability and packed in a lightweight, miniature housing so transmitter can rest comfortably and secure behind the head of the performer for an unobtrusive view. Featuring built-in rechargeable lithium battery with a guick charger for extended battery hours and patented ACT sync enables fast and easy transmitter setup from any MIPRO receivers.

ACT-22T can be connected to a MU-210d or MU-23d headworn microphone. Furthermore, it can be connected to a VM-10M instrument microphone for wireless violin transmission. Coupled with an antiscratch device, it can be attached to percussion, string and wind musical instruments for wireless audio

ACT-22T is easy to use and ideal for education, theater, aerobics/fitness, houses of worship applications.

## Assembled with MU-23d **Headworn Microphone**



	B
Oscillation Mode	PLL Synthesized
Frequency Range	480~934 MHz (country dependent)
Bandwidth	24 MHz
Channel Set-up	ACT Sync
RF Output Power	10~30 mW (country dependent)
Spurious	< -55 dBc
Battery	Built-in Rechargeable Lithium Battery
Operating Time	Up to 6 hours
Dimensions (W × H × D)	57 × 28 × 20 mm (2.2 × 1.1 × 0.8 ")
Weight	Approx. 38 g (1.3 oz), rechargeable battery included
Patent & Approvals	Patented. Telecom and safety regulations approved.
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.

# **Accessories - Transmitters**

# **Accessories - Transmitters**

## **ACT-32H** Handheld Transmitter

NEW

ACT-32HR Remote Volume Control Handheld Transmitter

NEW



#### **Features**

- 1. Extremely rugged, ergonomically designed housing.
- 2. The unique flat top multi-layered steel grille protects the capsule against impact, rolling, pop noise and ensures sound clarity.
- 3. The unique flat top multi-layered steel grille for condenser capsules and round top for dynamic capsules protect the capsule against impact, rolling and pop noise. The upper grille is able to be detached easily for cleaning and hygiene practices.
- 4. Premium true condenser microphone capsule provides high fidelity, wide frequency response, high dynamic range, rapid transient response, clarity and accurate sound reproduction.
- 5. Proprietary lockable silent on/off switch to avoid accidental power-off during performance.
- Impact-resistant battery compartment holds 2 AA batteries.
- Interchangeable colored rings for microphone channel identification on stage.
- LCD displays group, channel, battery level & error message codes.
- Low spurious PLL-synthesized technology enhances frequency stability and reliability. Patented "Built-in" antenna design.
- 10. World's first ACT <sup>™</sup> function provides precise and rapid frequency sync to the transmitters.
- Industry's only master level control enables volume be wirelessly controlled by ACT-32HR transmitter microphone instead of a separate remote.

## **Specifications**

Model	ACT-32H	ACT-32HR	
Built-in Volume Control	N/A	Yes. For MA-708 & MA-808 portables installed with MRM-70B & MRM-72B receiver modules	
Housing	Rugged Plastic		
Oscillation Mode	PLL Synthesized		
Frequency Range	480~934 MHz (countr	y dependent)	
Bandwidth	24 MHz		
Channel Set-Up	ACT Sync		
RF Output Power	10~30 mW (country dependent)		
Max. Input Level	140 dB SPL		
Display	LCD displays group, channel, battery status & error codes		
Capsules	Standard MU-79: ECM Optional MU-89: TCM or MU-59 Dynamic		
Battery	2 AA alkaline		
Dimensions (Ø × L)	50 × 233 mm (2.0 × 9.2 ")		
Weight	Approx. 246 g (8.68 oz), excluding batteries		
Patents & Approvals	Patented. Telecom and safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries		

# ACT-32T NEW Bodypack Transmitter



# Antenna Mute Button Audio Input Connector LCD Display Panel Remote Mute Connector

ACT IR Port

MODE Button

SET Button

Power Button

**Battery Cover** 

ACT-52T NEW

**Bodypack Transmitter** 

#### **Features**

- Miniature, compact design in metal (52T) / plastic (32T) housing.
- Top features mute switch, mini-XLR connector and antenna.
- Backlit LCD displays various parameters and indicators.
- Unique battery cover design provides easy access to operational controls and protects against accidental change of settings.
- 5. Connector for optional MJ-70 remote mute switch cable
- Low spurious PLL-synthesized technology enhances frequency stability and reliability. One-touch ACT syncs the transmitter and receiver frequency automatically.
- Selectable impedance for microphone or guitar/line inputs.
- 8. 4-pin mini XLR connector is compatible with all MIPRO lavalier, headworn microphones and instrument cable.
- 9. Highly efficient power consumption circuitry ensures long operating hours from 2 AA batteries.
- Adjustable belt clip allows wearing transmitter in up or down position.

## **Specifications**

MIPRO

Model	ACT-32T	ACT-52T	
Housing	Plastic Metal Composite		
Frequency Range	480~934 MHz (coun	try dependent)	
Bandwidth	24 MHz		
Channel Set-Up	ACT Sync		
Oscillation Mode	PLL Synthesized		
LCD Display	LCD displays working band-code, group, channel, frequency, AF input gain, RF output power, mute & lock status, battery status and error codes.		
RF Output Power	10 / 50 mW switchable (country dependent)		
Spurious Emissions	<-55 dBc		
Max. Input Level	0 dBV		
Mute Connector	Optional MJ-70 remote mute switch		
Battery	2 AA alkaline		
Dimensions (W × H × D)	63 × 82 × 22 mm (2.5 × 3.2 × 0.9 ")		
Weight (excluding batteries)	Approx. 81 g (2.8 oz)	Approx. 98 g (3.5 oz)	
Patents & Approvals	Patented. Telecom and safety regulations approved.		
Notes	Refer to actual product in the event of product description discrepancy. Frequency range and maximum deviation comply with the regulations of different countries.		

# **Accessories - Headworn Microphones**

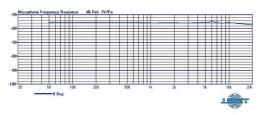
# Accessories - Headworn Microphones

# MU-13 | MU-13d Single-Sided Earworn Microphone





# Frequency Response



#### **Features**

- 1. Proprietary over-the-ear, shapeable frame design for an ultra secure, comfortable fit.
- 2. Supplied in three earworn sizes for ideal fit.
- 3. Fixed or detachable boom can be worn on left or right and detached for replacement or servicing.
- 4. Subminiature 3mm omni-directional condenser capsule.
- 5. Resistant to moisture, perspiration and salts.
- 6. Detachable cables with various types of plug are available.
- 7. Soft yet flexible thin boom can be bent 120 ° and boom holder can be height rotated for an ideal fit.
- 8. Ideal for speech applications.

## **Specifications**

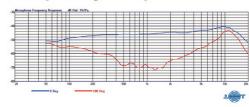
Capsule Module	3 mm Ø omni-directional condenser microphone
Frequency Response	40 Hz~20 kHz
Sensitivity	-56 ± 3 dBV/Pa (0dB=1V/Pa)
Max. SPL	138 dB (1%THD typical)
Microphone Holder	Single-side
Plug	4-pin mini XLR (screw-lock)
Color	Beige
Cable Length	150 cm (59 ")
Weight	Approx. 16 g (0.56 oz)
Note	Refer to actual product in the event of product description discrepancy.

# MU-210 | MU-210d Dual-Sided Headworn Microphone





## **Frequency Response**



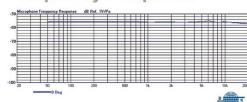


# MU-23 | MU-23d Dual-Sided Headworn Microphone





## Frequency Response



#### **Features**

- 1. Compact ear-hook design for a secure, ultra comfortable fit.
- 2. Supplied in three ear-hook sizes for ideal fit.
- 3. Detachable boom can be worn on left or right & detached for replacement or servicing.
- 4. MU-210 / MU-210d features a 10mm uni-directional capsule.
- 5. MU-23 / MU-23d features a 3mm omni-directional capsule.
- 6. Resistant to moisture, perspiration and salts.
- Detachable or fixed microphone boom options.
- Soft yet flexible thin boom bens 120° and holder can be height rotated for an ideal fit.
- 9. Ideal for speech and vocal applications

Models			
iviodeis	MU-210   MU-210d	MU-23   MU-23d	
	10 mm Ø uni- directional condenser microphone	3 mm Ø omni- directional condenser microphone	
Frequency Response	50 Hz~18 kHz	40 Hz~20 kHz	
Sensitivity	-46 ± 3 dBV/Pa (0dB=1V/Pa)	-56 ± 3 dBV/Pa (0dB=1V/Pa)	
Max. SPL	142 dB (1%THD typical)	138 dB (1%THD typical)	
Microphone Holder	Can be installed right or left side.		
Plug	4-pin mini XLR (screw-lock)		
Color	Beige		
Cable Length	150 cm (59.1 ")		
Weight	Approx. 27 g (1.0 oz) Approx. 22 g (0.8 oz		
Note	Refer to actual product in the event of product description discrepancy.		

# Accessories - Lavalier Microphones

# Accessories - Rechargeable Batteries

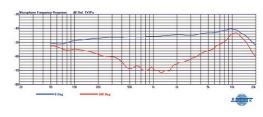
# MU-53L | MU-53LS Uni-Directional Lavalier Microphones

# MB-80 12V Lithium Iron Phosphate Battery Case





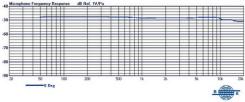
## Frequency Response



# MU-55L | MU-55LS Omni-Directional Lavalier Microphones

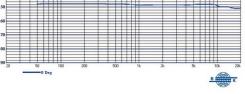






#### **Features**

- 1. MU-53 features high dynamic range characteristic and sustains up to 142 dB SPL with 1% T.H.D.
- 2. Miniature MU-55 is inconspicuous, lightweight and waterproof.
- 3. Supplied with 4-pin mini XLR and fits all MIPRO bodypack transmitters.
- 4. Featuring a smooth, warm, natural sound.
- 5. Available in black or beige colors.
- 6. Ideal for theater, houses of worship and educational applications.



## **Specifications**

Models	MU-53L   MU-53LS	MU-55L   MU-55LS	
Capsule Module	10 mm Ø uni-directional condenser microphone	4.5 mm Ø omni-directional condenser microphone	
Frequency Response	50 Hz~18 kHz	40 Hz~20 kHz	
Sensitivity	-46 ± 3 dBV/Pa (0dB=1V/Pa)	-49 ± 3 dBV/Pa (0dB=1V/Pa)	
Max. SPL	142 dB (1%THD typical)	135 dB (1%THD typical)	
Plug	4-pin mini XLR (screw-lock)		
Color	Black or Beige		
Cable Length	150 cm (59 ")		
Weight	Approx. 19 g (0.7 oz)	Approx. 14 g (0.5 oz)	
Note	Refer to actual product in the event of product description discrepancy.		



#### **Profile**

MB-80 battery case is designed to hold four 65~70mm (length) lithium iron phosphate batteries. Four series-connected battery voltage coincides and are compatible with the voltage of 12V lead-acid batteries. Therefore, it can be a direct replacement battery for the existing MB-70 lead-acid battery inside the MIPRO MA-707, MA-708 & MA-808 portable wireless PA systems.

Currently, the lithium iron phosphate battery (LiFePO or LFP battery) is recognized as the leader for number of charge and discharge cycles of rechargeable battery. Generally, the average life of a rechargeable lead-acid or lithium battery is 500 discharge-recharge cycles. Higher quality LiFePO or LFP has up to 2,000 discharge-recharge cycles. It is considered as an environmetally friendly battery, superior cycle life, reduced failures and half the weight of an equivalent capacity lead-acid, thus, an ideal replacement and upgrade battery option. It is readily available by MIPRO and other rechargeable battery shops.

MB-80 has BMS smart battery management circuits and provides safe charging protection technology and extremely long life cycles.

#### Features

- 1. It holds four 32650/26650/32700 LFP model type battery.
- 2. Same polarity direction insertion with screws and hooks for secured and easy installation.
- 3. Standard output voltage 12.8V; maximum continuous output current up to 8A.
- 4. Safe shorts circuits technology prevents overcharging and safe operation.
- 5. Each battery has overcharge and over discharge protection circuits; overcharge protection voltage 3.9V; overdischarge protection voltage 2.0V.
- 6. Smart management circuits ensures balanced charging and discharge states.
- 7. Weight: 240 grams / 8.5 ounces (case only, excluding 4 batteries).
- 8. Dimensions:  $69.5 \times 89.5 \times 101$  m/m / (same dimensions as MB-70, 12V/4.5Ah).
- 9. Flame retardant class V0.

## **General LFP Battery Specifications & Capacity Characteristics**

Туре	26650	26650 (capacity)	32650	32650 (capacity)	32700 (capacity)
Capacity	2.3Ah	3.0Ah	4.0Ah	5.0Ah	5.0Ah
Dimensions	26(D) × 65(L) mm 1 (D) × 2.6 (L) in	26(D) × 65(L) mm 1 (D) × 2.6 (L) in	32(D) × 65(L) mm 1.3(D) × 2.6(L) in	32(D) × 65(L) mm 1.3(D) × 2.6(L) in	32(D) × 65(L) mm 1.3(D) × 2.6(L) in

# **Accessories - Batteries & Others**

# MA-303AXP Application

## Replacement Rechargeable Batteries

### **MB-10**

14.8V/2.6AH rechargeable Lithium battery for MA-100 & MA-303

## **MB-25**

14.8V/2.6AH rechargeable Lithium battery for MA-101B & MA-202B

## **MB-30**

12V/2.9AH rechargeable Sealed Lead-Acid battery for MA-705

#### **MB-35 MB-70**

12V/4.5AH rechargeable rechargeable Lithium Sealed Lead-Acid battery for MA-505 battery for MA-707. MA-708 & MA-808

### MB-80 NEW

12.8V rechargeable LFP battery case for MA-707, MA-708 & MA-808



## **Stands**

#### **MS-11** For MA-101ACT



**MS-30** 

For MA-100, MA-101B, MA-202B & MA-303



**MS-70** 

22.2V/4.5AH

For MA-505, MA-705, MA-808



For MA-303



## Storage / Carry Bags

#### SC-10 For MA-100 &

MA-101B

SC-20 For MA-202B

SC-30 For MA-303

SC-50

MA-705

For MA-505 & For MA-707

SC-70

**SC-75** 

For MA-708





















## **Extension Speakers**

## MA-101EXP MA-303AXP

For MA-101ACT

For MA-303 (active speaker)

## MA-705EXP MA-707EXP

For MA-705 For MA-707 (10-meter cable included) (10-meter cable included)

## **MA-708EXP**

For MA-708 (10-meter cable included)

## MA-808EXP

(10-meter cable included)

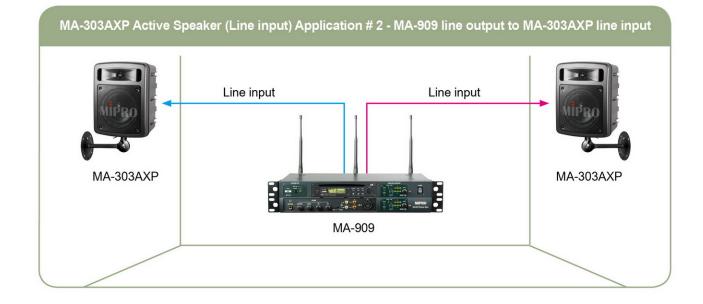
For MA-808

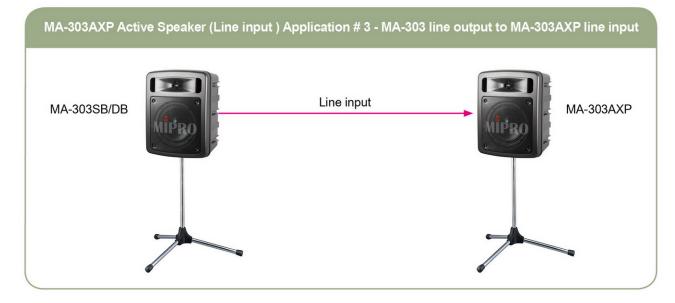






# MA-303AXP Active Speaker (Line input ) Application # 1- Mixer output to MA-303AXP line input 6 Line input Line input MA-303AXP MA-303AXP Mixer















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CDM-3AP       32         D       32         DPM-3F       27         M       MA-100DB       4         MA-100SB       4       MMA-101B       6         MA-101ACT       10       MA-101EXP       40         MA-202B       8       MA-303AXP       40         MA-303DB       14       MA-505       16         MA-705       18       MA-705       18         MA-707       20       MA-707       20         MA-707 & 20       MA-708       22         MA-708 & 22       40       MA-909       26         MA-808       24       MA-808       24         MA-909       26       MB-10       40         MB-25       40       MB-30       40         MB-30       40       MB-80       39         MP-101ACT       10		
D         DPM-3F       27         M       MA-100DB       4         MA-101B       6         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303BB       14         MA-705       18         MA-707       20         MA-708EXP       40         MA-708EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-80       39         MP-101ACT       10		
DPM-3F       27         M       MA-100DB       4         MA-101B       6         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303SB       14         MA-705       18         MA-707       20         MA-7078XP       40         MA-708       22         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	CDM-3AP	32
DPM-3F       27         M       MA-100DB       4         MA-101B       6         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303SB       14         MA-705       18         MA-707       20         MA-7078XP       40         MA-708       22         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
M         MA-100DB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-70       40         MB-80       39         MP-101ACT       10	D	
M         MA-100DB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-705       18         MA-705       18         MA-707       20         MA-707EXP       40         MA-708EXP       40         MA-808       24         MA-808EXP       40         MB-909       26         MB-10       40         MB-35       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	DPM-3	32
MA-100DB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-705       18         MA-705       18         MA-707       20         MA-707RXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	DPM-3F	27
MA-100DB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-705       18         MA-705       18         MA-707       20         MA-707RXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-100SB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705       18         MA-707       20         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-80       39         MP-101ACT       10	M	
MA-100SB       4         MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705       18         MA-707       20         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-80       39         MP-101ACT       10	MA-100DB	4
MA-101B       6         MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-80       39         MP-101ACT       10		
MA-101ACT       10         MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707PEXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-101EXP       40         MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MB-909       26         MB-10       40         MB-35       40         MB-35       40         MB-80       39         MP-101ACT       10		
MA-202B       8         MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MB-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	THE PROPERTY OF THE PROPERTY OF	
MA-303AXP       40         MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-303DB       14         MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MB-909       26         MB-10       40         MB-25       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-303SB       14         MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808       24         MA-909       26         MB-10       40         MB-25       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-303AXP	40
MA-505       16         MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-303DB	14
MA-705       18         MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-303SB	14
MA-705EXP       40         MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-505	16
MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-705	18
MA-707       20         MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-705EXP	40
MA-707EXP       40         MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-708       22         MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-708EXP       40         MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	The state of the s	
MA-808       24         MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-808EXP       40         MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MA-909       26         MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MB-10       40         MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10		
MB-25       40         MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MA-909	26
MB-30       40         MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MB-10	40
MB-35       40         MB-70       40         MB-80       39         MP-101ACT       10	MB-25	40
MB-70     40       MB-80     39       MP-101ACT     10	MB-30	40
MB-80 39 MP-101ACT 10	MB-35	40
MB-80 39 MP-101ACT 10	MB-70	40
MP-101ACT 10		987300
WIN-30D 20		
	IVIN-30D	20

M	
MRM-70B	30
MRM-72B	30
MS-11	40
MS-30	40
MS-70	40
MS-90	40
MT-101ACT	10
MT-91	31
MT-92	31
MTM-92	31
MU-13	36
MU-13d	36
MU-1FL	36
MU-1FM	36
MU-1FS	36
MU-210	37
MU-210d	37
MU-23	37
MU-23d	37
MU-2FL	37
MU-2FM	37
MU-2FS	37
MU-53L	38
MU-53LS	38
MU-55L	38
MU-55LS	38
P	
PC-11	10
S	
SC-10	40
SC-20	40
SC-30	40
SC-50	40
SC-70	40
SC-75	40
SC-80	40